



Water Conditions Summary

Operations Control and Technical Support Department Operations & Maintenance Resource Area

Governing Board Presentation
August 15, 2002

The background features a large, light blue watermark of the University of Maryland seal. The seal is circular with a crest in the center and the words "UNIVERSITY OF MARYLAND" around the top and "1875" at the bottom.

Meteorological Conditions

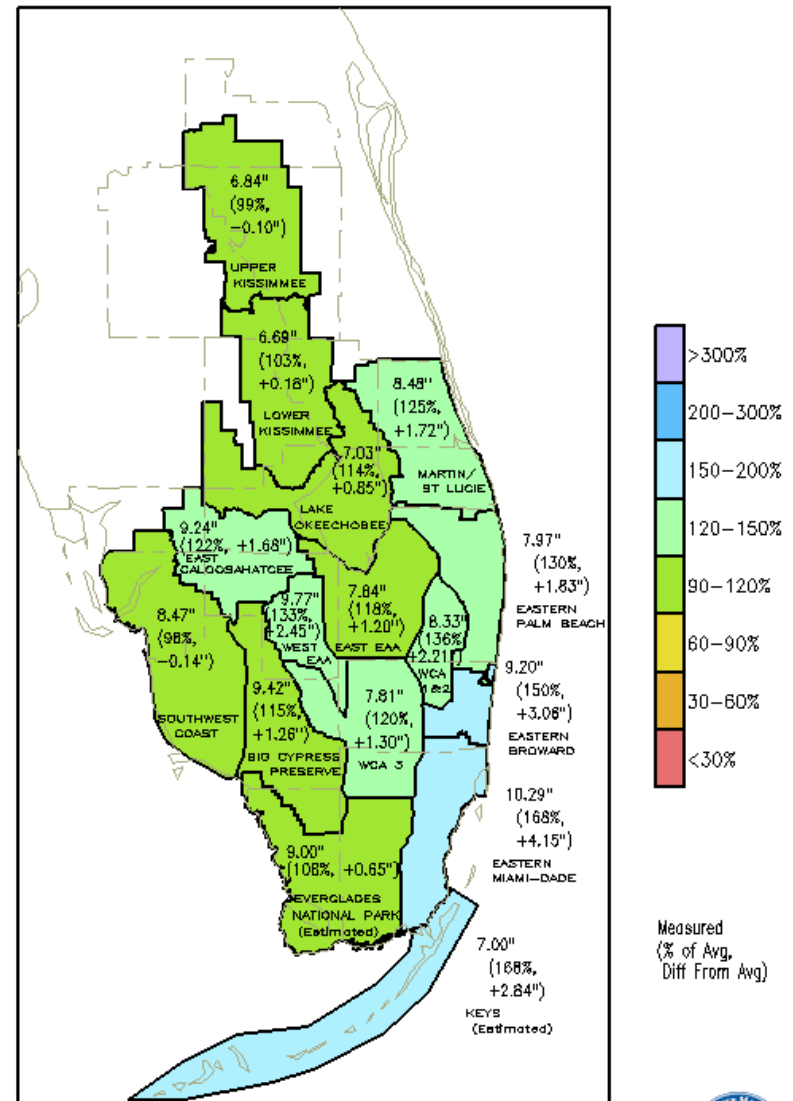
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Meteorological Conditions

- **While July rainfall was above average, conditions were significantly drier than June**
- July Rainfall : District-wide rainfall was 117% of average
 - Normal Rainfall: 6.98 inches
 - Actual Rainfall: 8.16 inches
 - Est. Pan Evaporation: 5.40 inches
- August Rainfall : To-date District-wide rainfall is 98% of average

SFWMD Rainfall
02-Jul-2002 to 01-Aug-2002

- Wet conditions experienced in June continued into early July, then transitioned to below average rainfall
 - 5" in the first 12 days of July
 - 3" in the last 19 days of July



DISTRICT-WIDE: 8.16" (117%, +1.18")

GRADS: COLA/IGES



2002 Hurricane Season Status








Category	Predicted	Average	To Date
Named Storms	9	9	3
Hurricanes	4	6	0
Strong Hurricanes	1	2	0

The background features a large, light blue watermark of the University of Maryland logo, which is a circular seal containing the text "UNIVERSITY OF MARYLAND" and "1875".







Hydrologic Conditions

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General Hydrologic Conditions

-  **Upper Chain** - High seasonal levels
-  **Kissimmee River** - Normal seasonal levels
-  **Lake Okeechobee** - Normal seasonal levels
-  **Lake Okeechobee Agriculture**
-  **Estuaries** - Low salinity

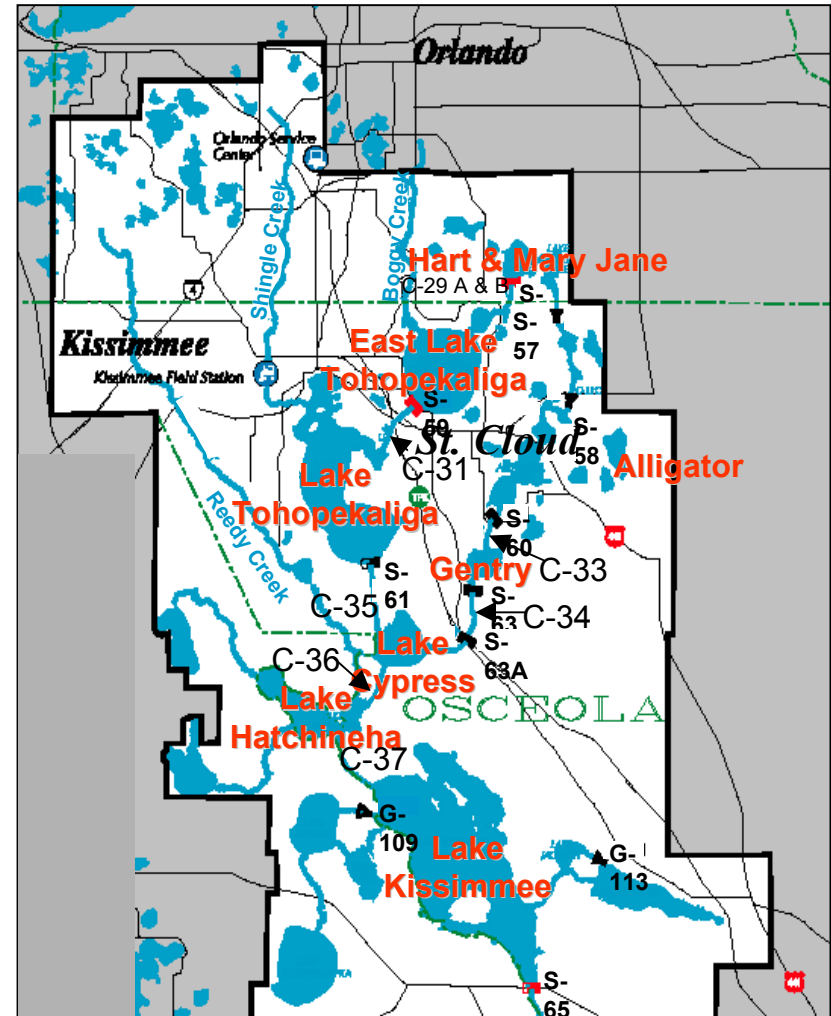
General Hydrologic Conditions

-  **Water Conservation Area 1** - Norm. Stages
-  **Water Conservation Area 2** - Norm. Stages
-  **Water Conservation Area 3** - >Norm. Stages
-  **ENP** - Normal seasonal conditions
-  **Fl. Bay** - Normal seasonal conditions
-  **Upper East Coast** - Norm. groundwater
-  **Lower East Coast** - Norm. groundwater
-  **Lower West Coast** - Norm. groundwater

Hydrologic Conditions

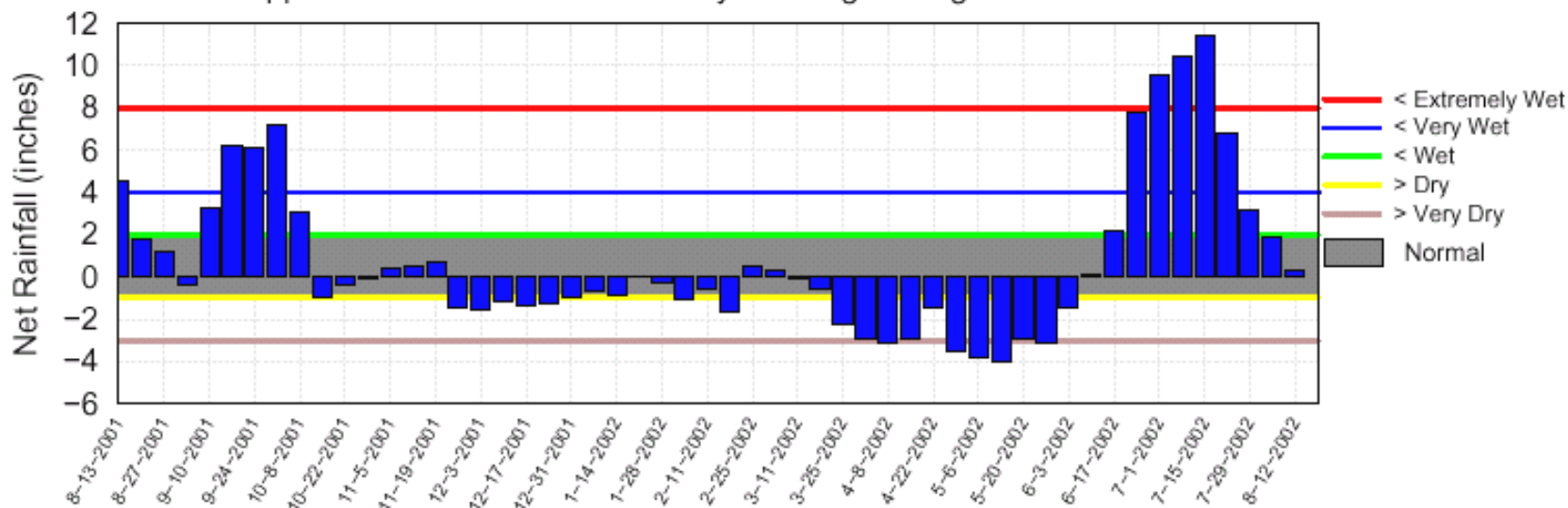
Upper Kissimmee Basins

- All remain at or above their regulation schedule
 - This condition is in response to earlier wet season rainfall
 - All lakes are currently making regulatory releases

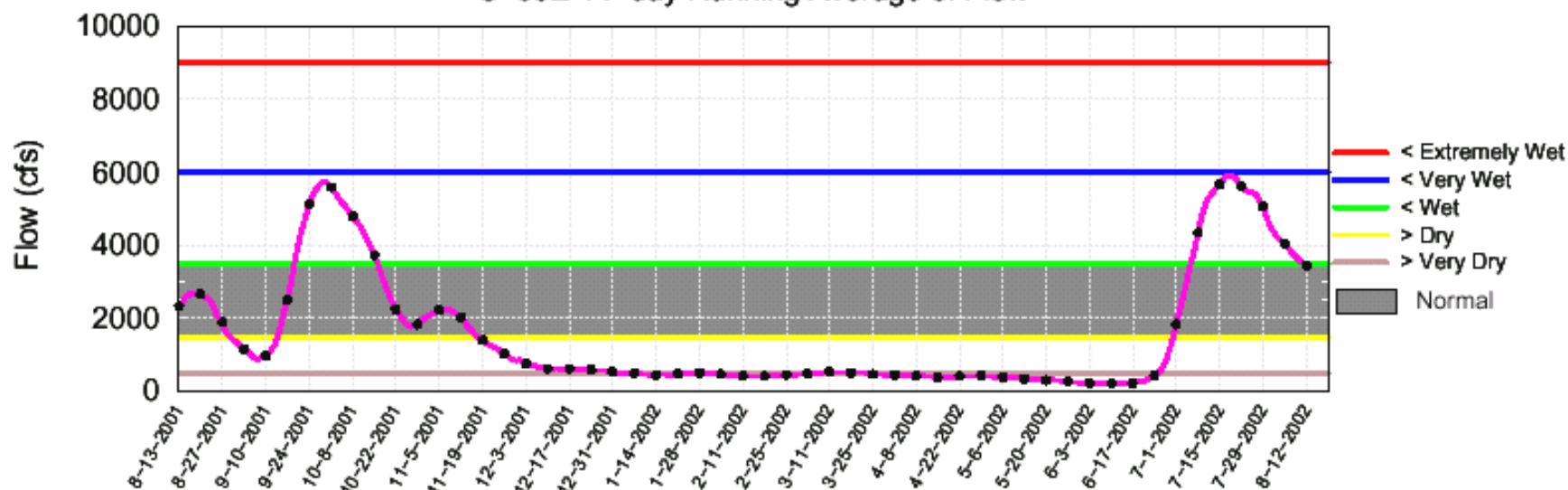


Tributary Basin Condition Indicators as of August 12, 2002

Upper & Lower Kissimmee 30-day Running Average of Net Rainfall



S-65E 14-day Running Average of Flow



Hydrologic Conditions Lake Okeechobee

- One short backpumping event during July
 - Moderate to locally heavy rainfall caused canal stages to exceed the S-3 flood threshold on 7/22
 - Duration: 7/22 - 7/23
 - Pumped one unit
 - Estimated volume: ~1,400 ac-ft

Hydrologic Conditions Lake Okeechobee

- **Lake Okeechobee stages have fallen to the bottom of Zone D in response to...**
 - Near average rainfall over the past month
 - Two Level I pulse releases to estuaries (~2,330 cfs avg. day)
 - Released about 92,400 ac-ft (~0.2 ft. of equiv. Lake depth)
 - Regulatory releases south to WCA-1 over a 16 day period after WCA-1 fell below its regulation schedule
 - Pumped about 38,800 ac-ft (~0.08 ft. of equiv. Lake depth)
 - ~29,700 ac-ft released to tide from WCA-1
 - ~9,100 ac-ft released and held in STA-2
- **Releases to the estuaries have been terminated per the regulation schedule**
 - **May be reinitiated if conditions warrant**

Lake Okeechobee

Published: 8/15/02

Stage Data For This Date:

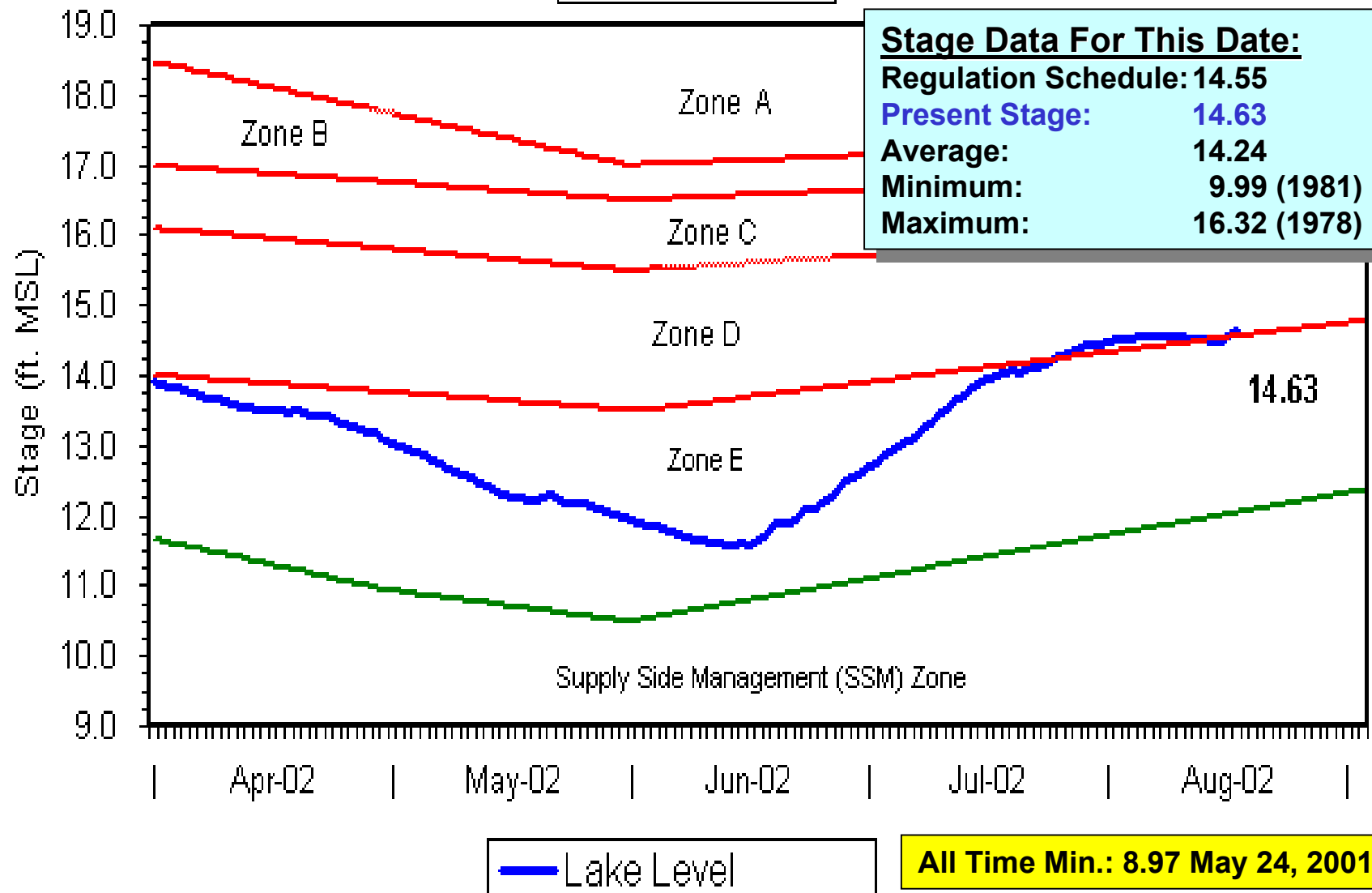
Regulation Schedule: 14.55

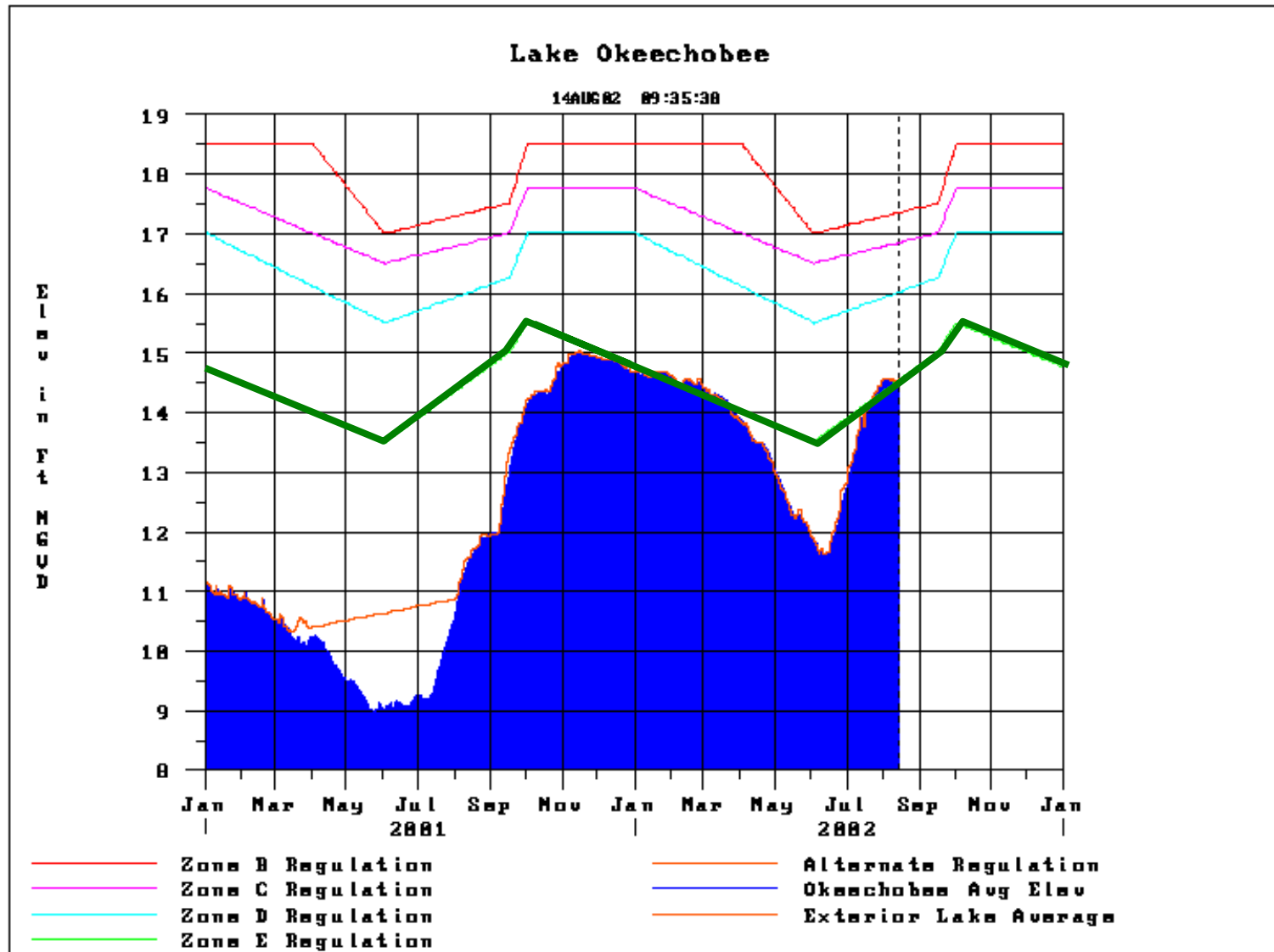
Present Stage: 14.63

Average: 14.24

Minimum: 9.99 (1981)

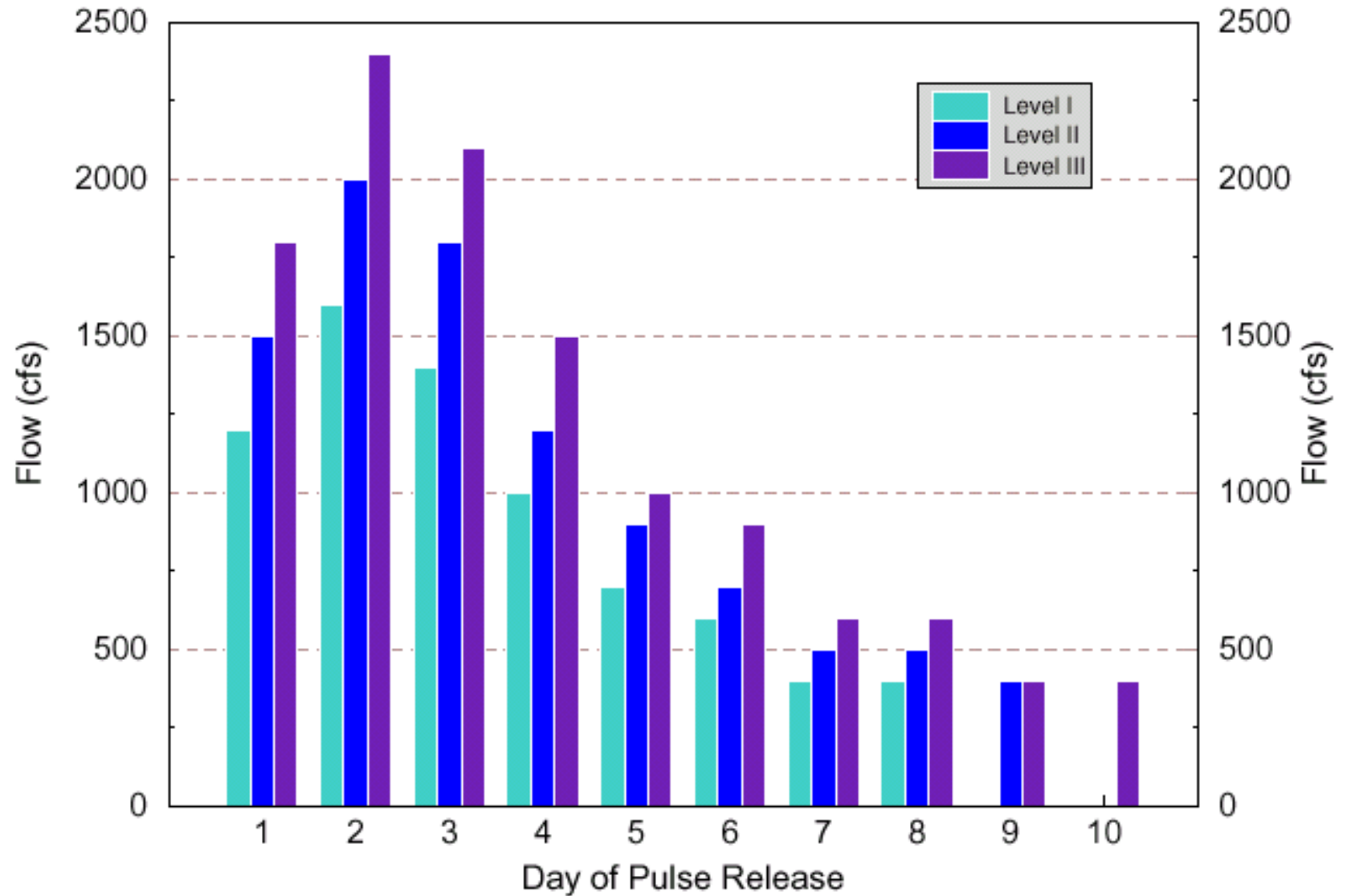
Maximum: 16.32 (1978)





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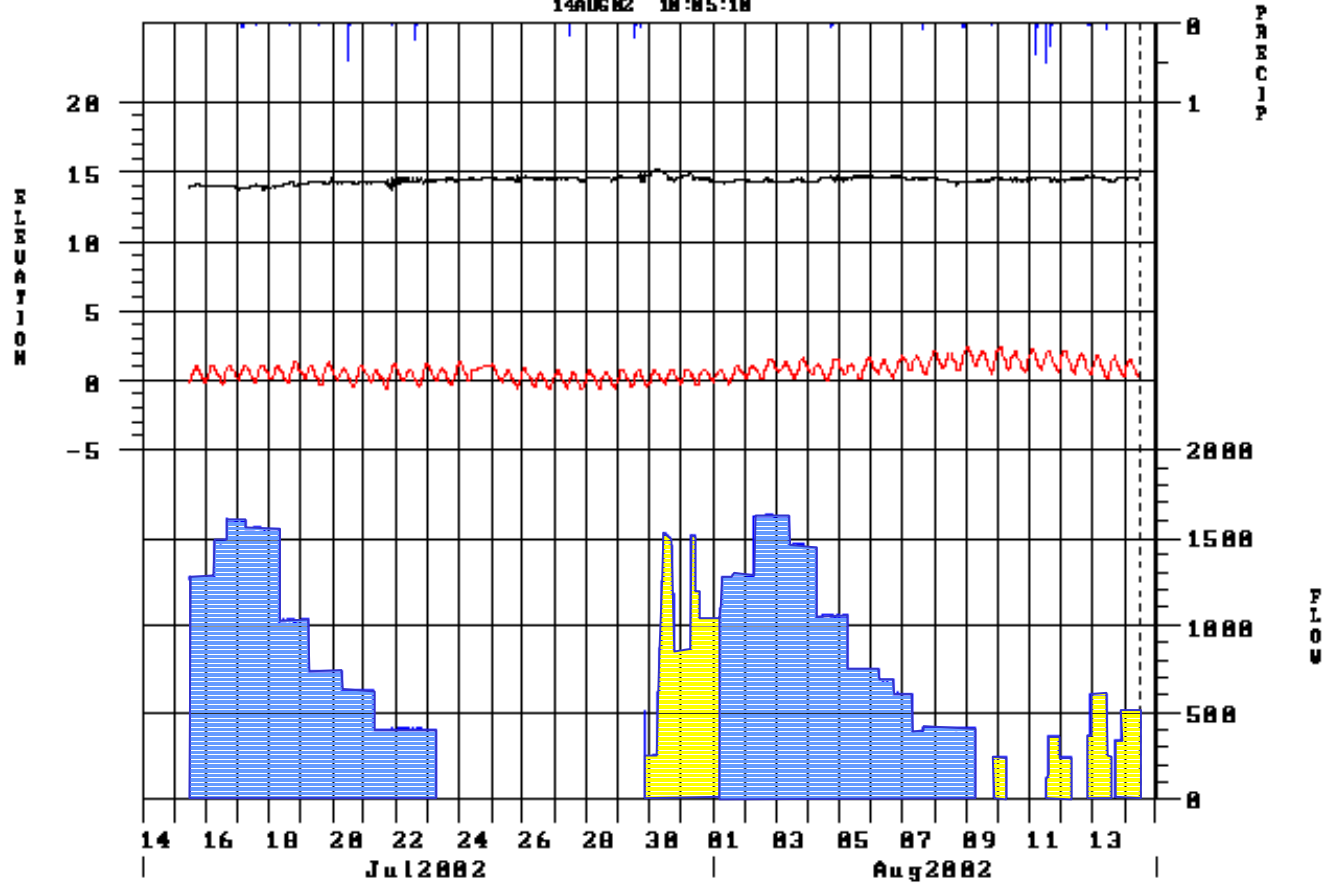
St. Lucie Pulse Release Flow Hydrograph



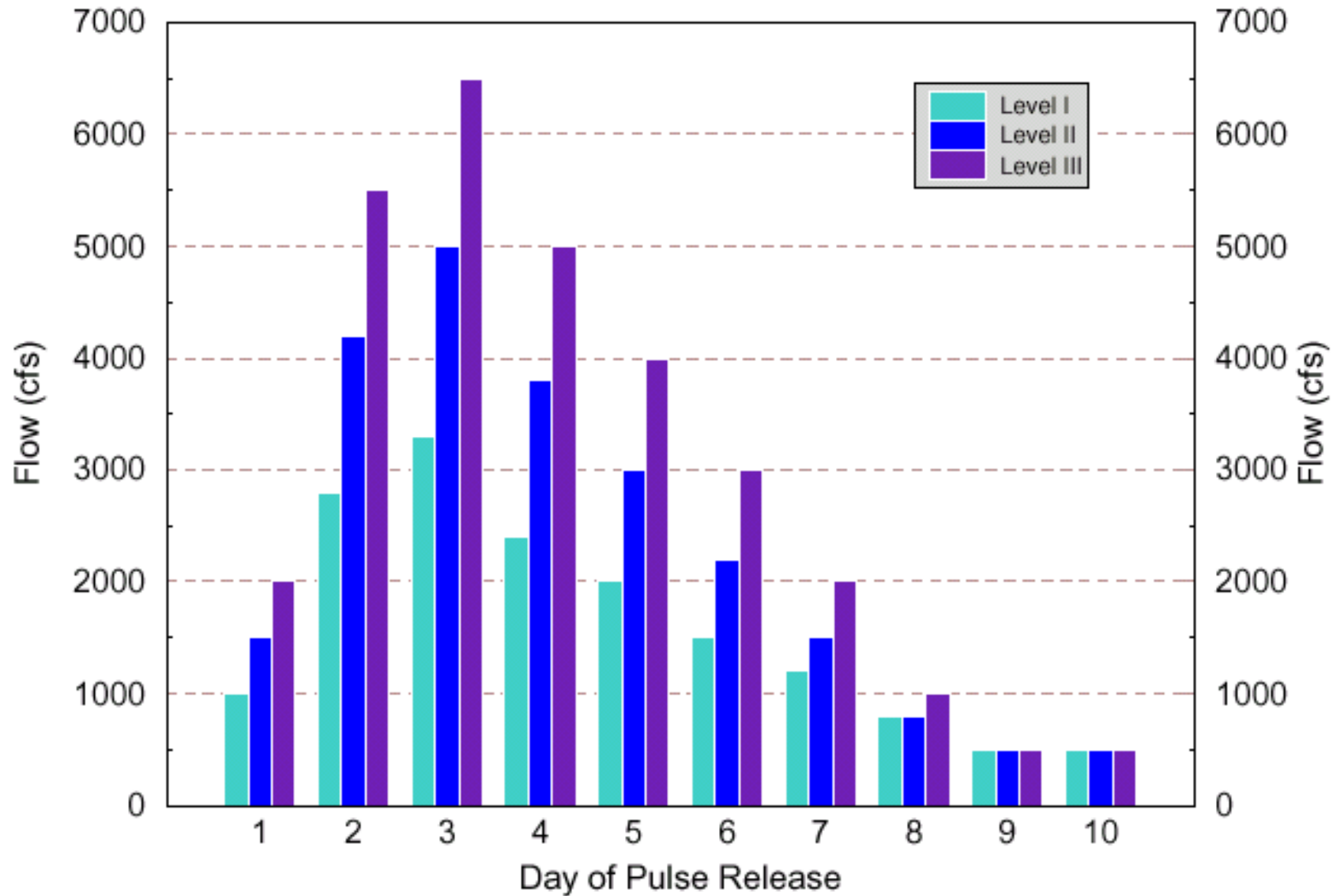
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S80 - Headwater, Tailwater, Flow & Rainfall

14AUG02 10:05:10



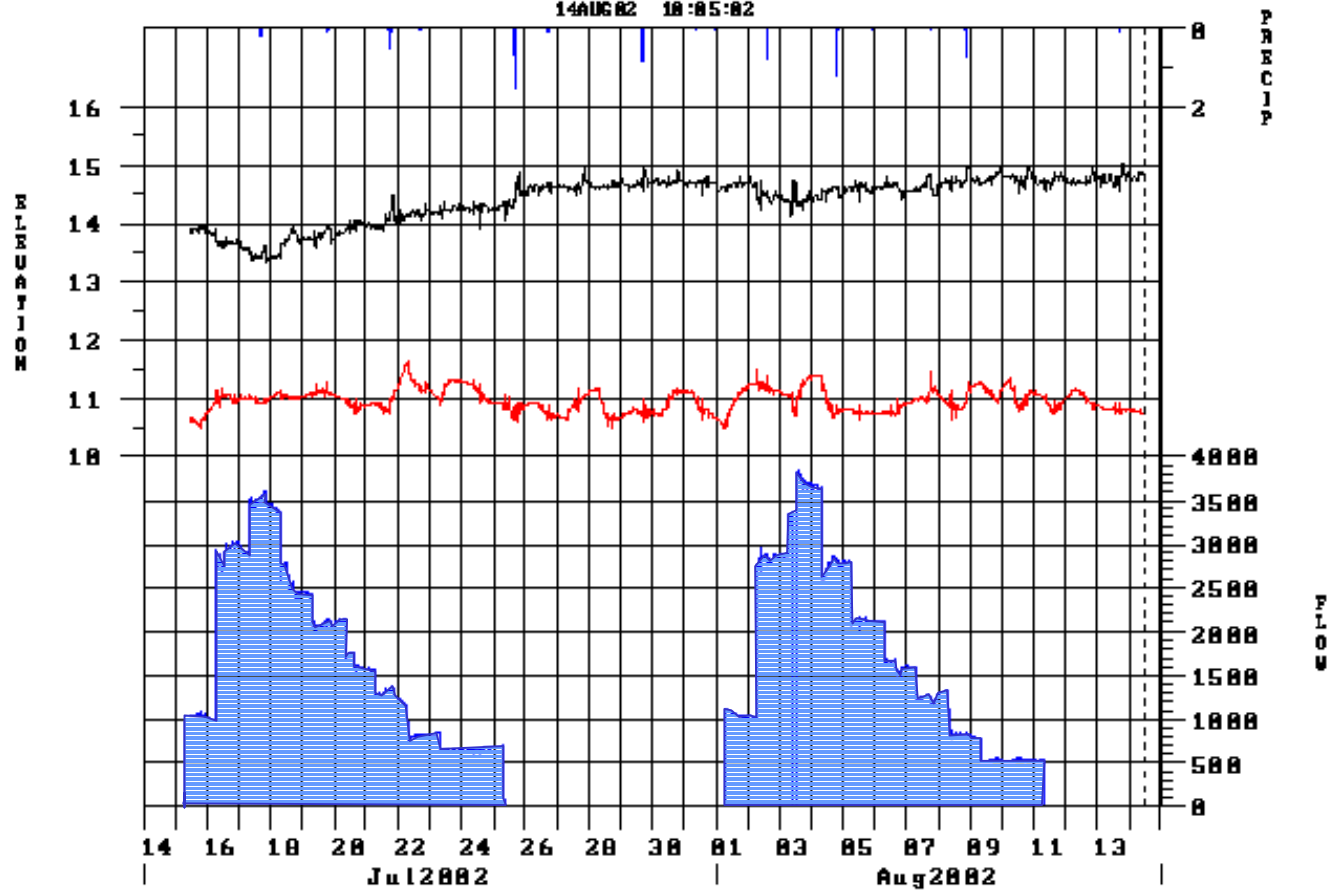
Caloosahatchee Pulse Release Flow Hydrograph



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S77 - Headwater, Tailwater, Flow & Rainfall

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Lake Okeechobee

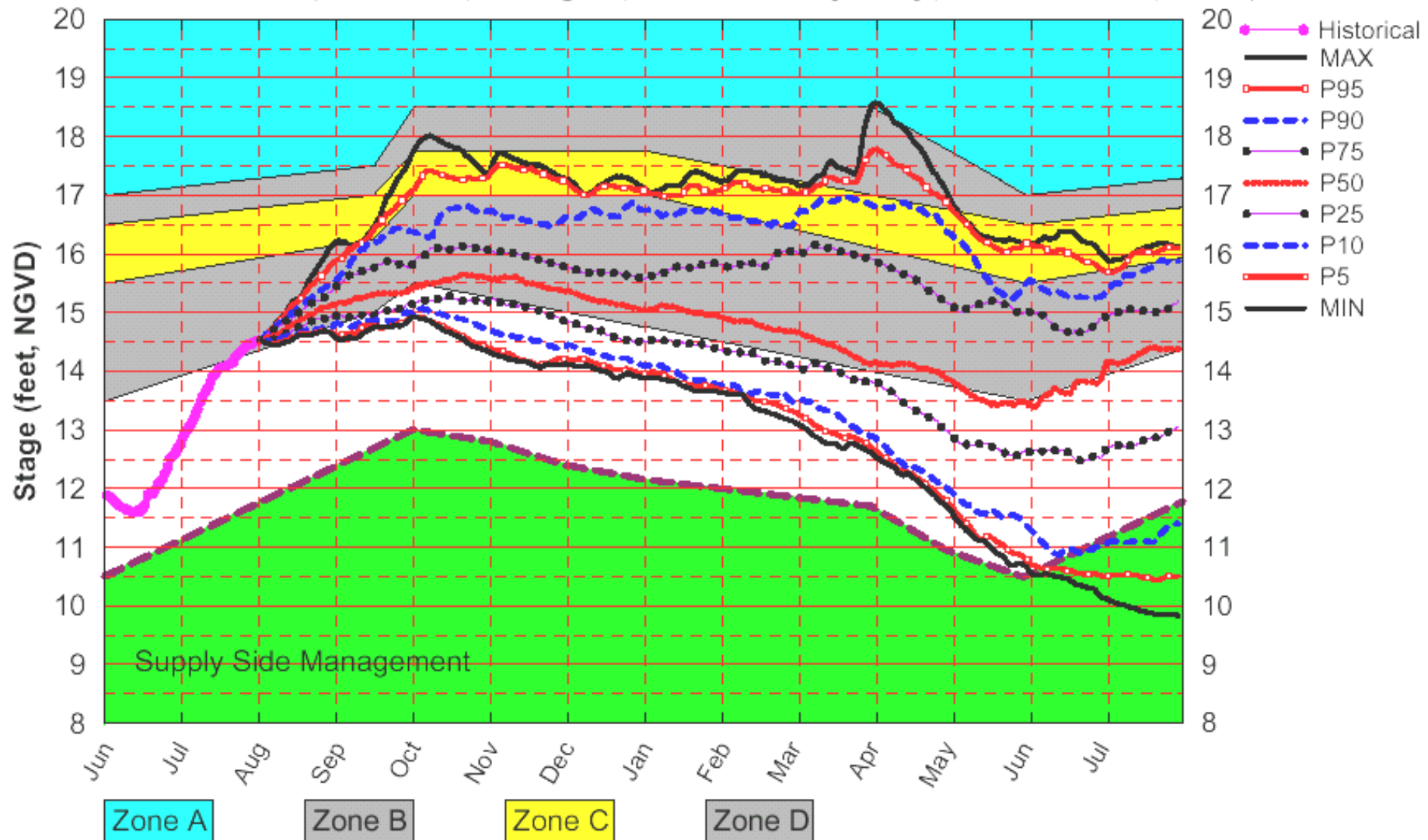
Current Operations

- **Lake Okeechobee Regulation Schedule (WSE)**
 - Stages presently in Zone D
 - Normal Kissimmee River inflows
 - Normal rainfall
 - Wet seasonal forecast
 - Wet multi-seasonal forecast
- Regulatory discharge to the WCAs
- No regulatory discharge to estuaries currently required



Lake Okeechobee SFWMM Aug 2002 Position Analysis

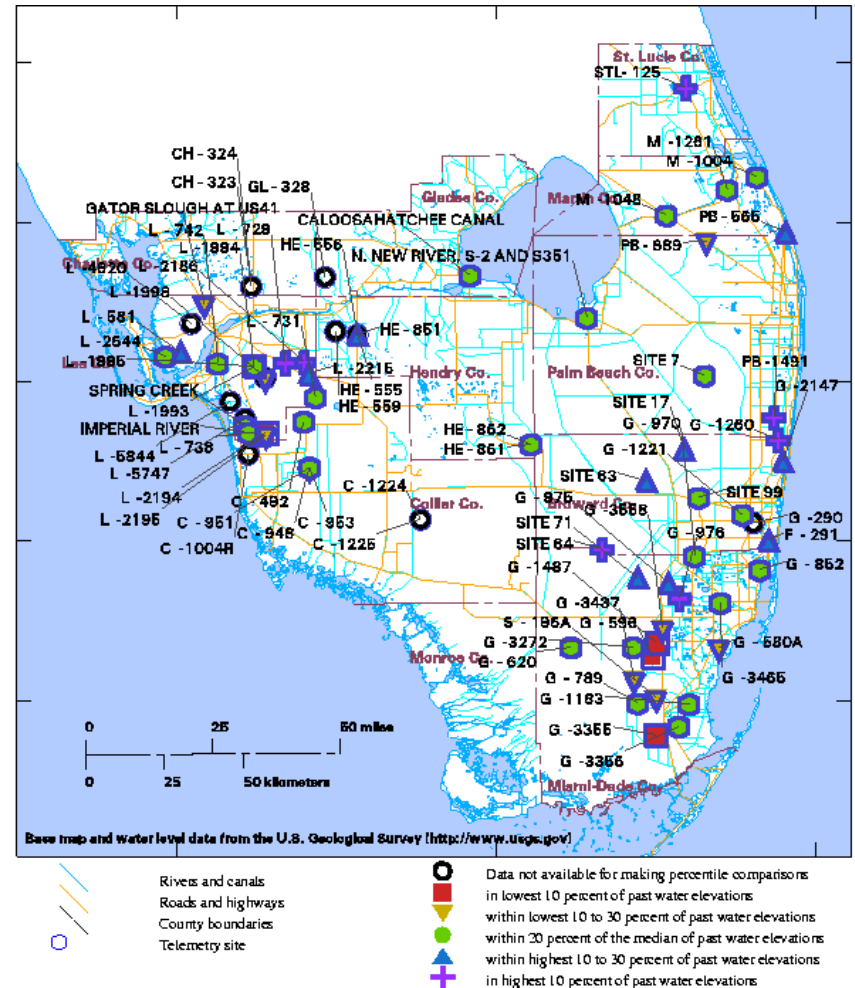
PA Unconditional PA (See assumptions @ http://www.sfwmd.gov/org/pld/hsm/sfwmm_pa.html)



Hydrologic Conditions

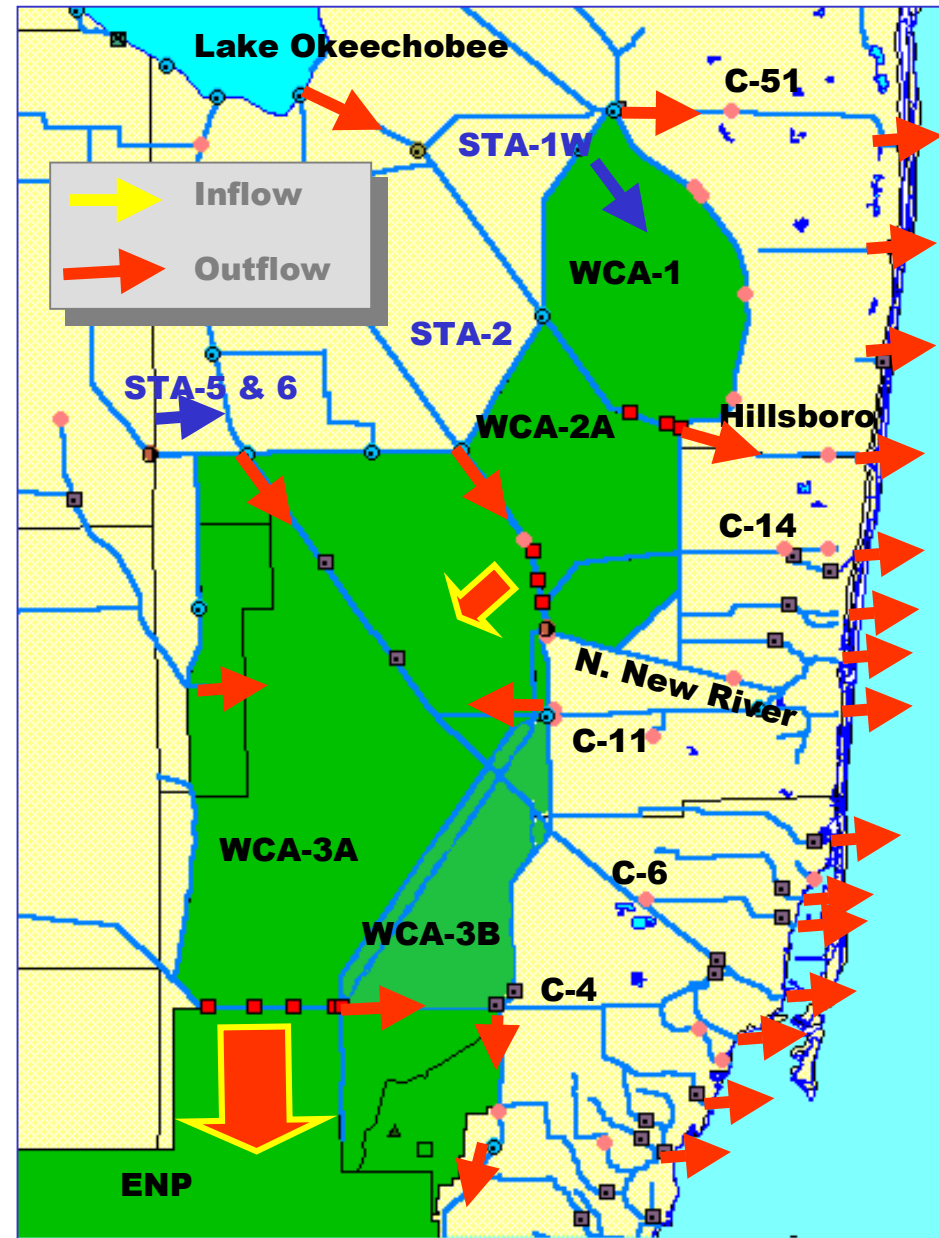
Groundwater Conditions

- East Coast
 - Most wells at or above normal seasonal levels
 - Portions of South Dade below normal
- Lower West Coast Region:
 - Most wells at or above normal seasonal levels



Water Conservation Areas - July Operations

- WCA-1 is below schedule
- WCA-2 & 3 stages are currently above regulation schedules
- Regulatory releases currently being made
 - WCA-2A
 - WCA-3A

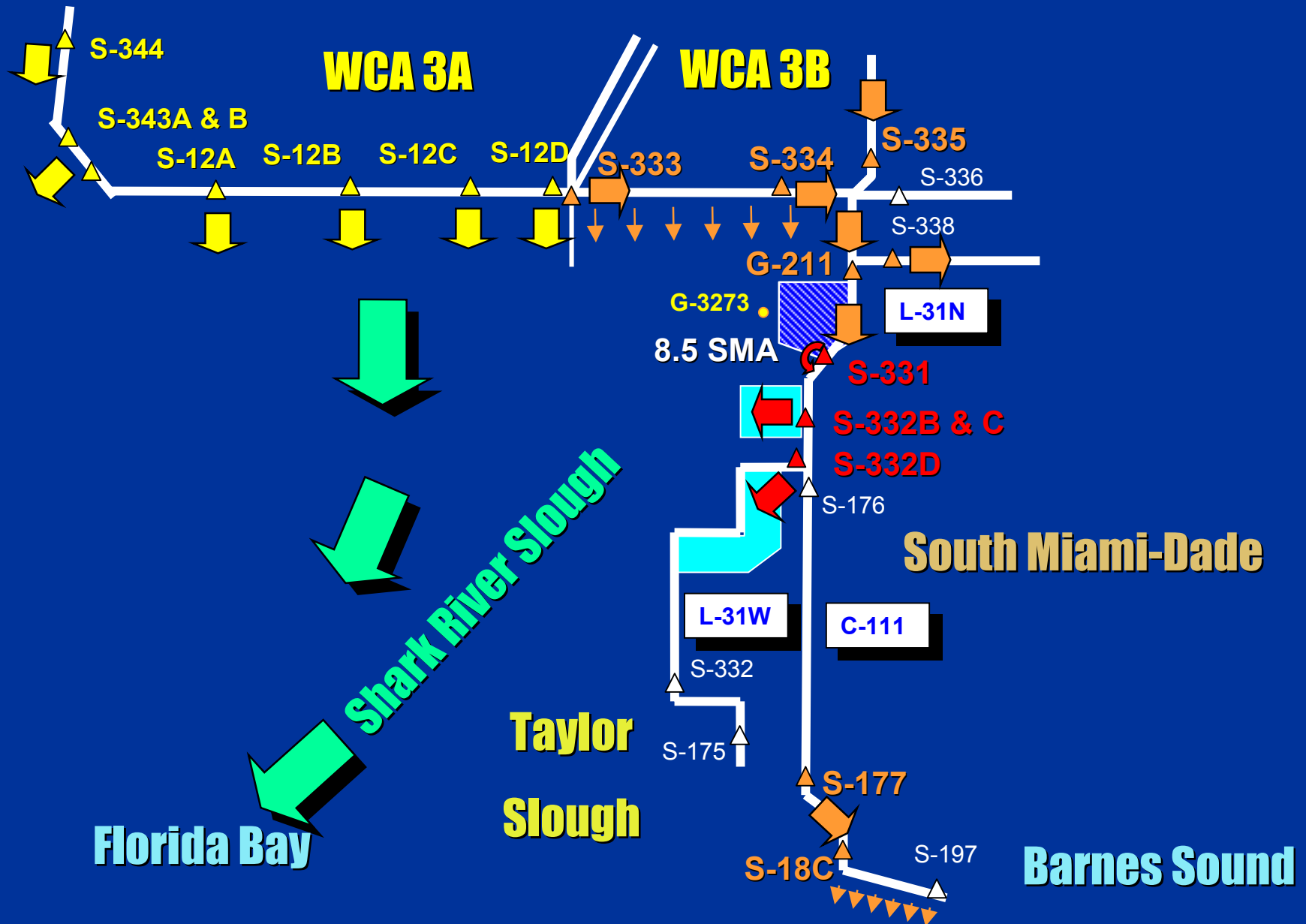


Hydrologic Conditions

SDCS Current Operations

- Initiated IOP criteria in early August
- High stages in WCA-3A have caused concerns regarding tree island impacts
- Current operations focused on bringing water into South Miami-Dade from WCA-3A while utilizing low canal operating ranges (similar to ISOP 2001 levels)

SDCS - IOP 2001 August Operations

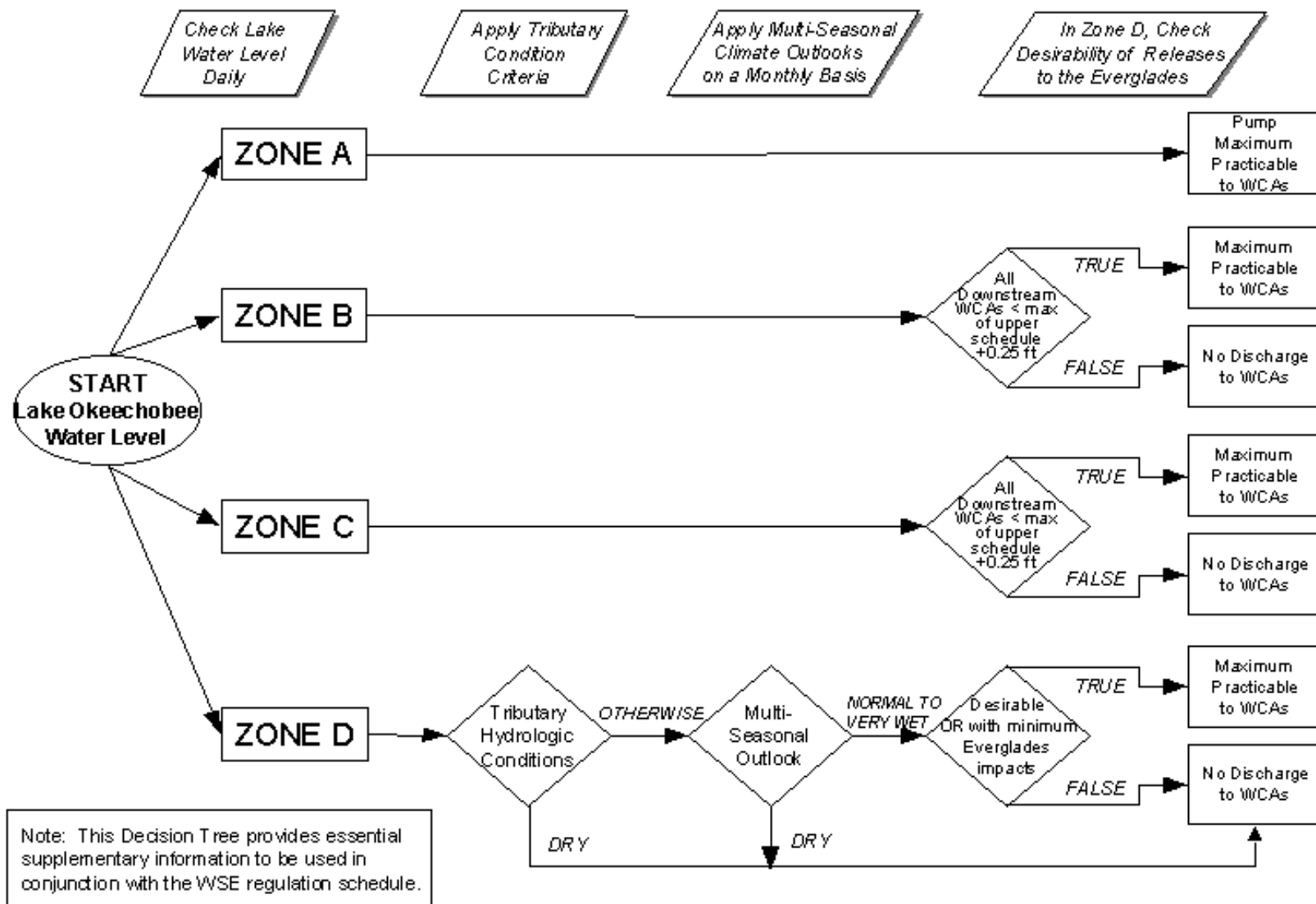




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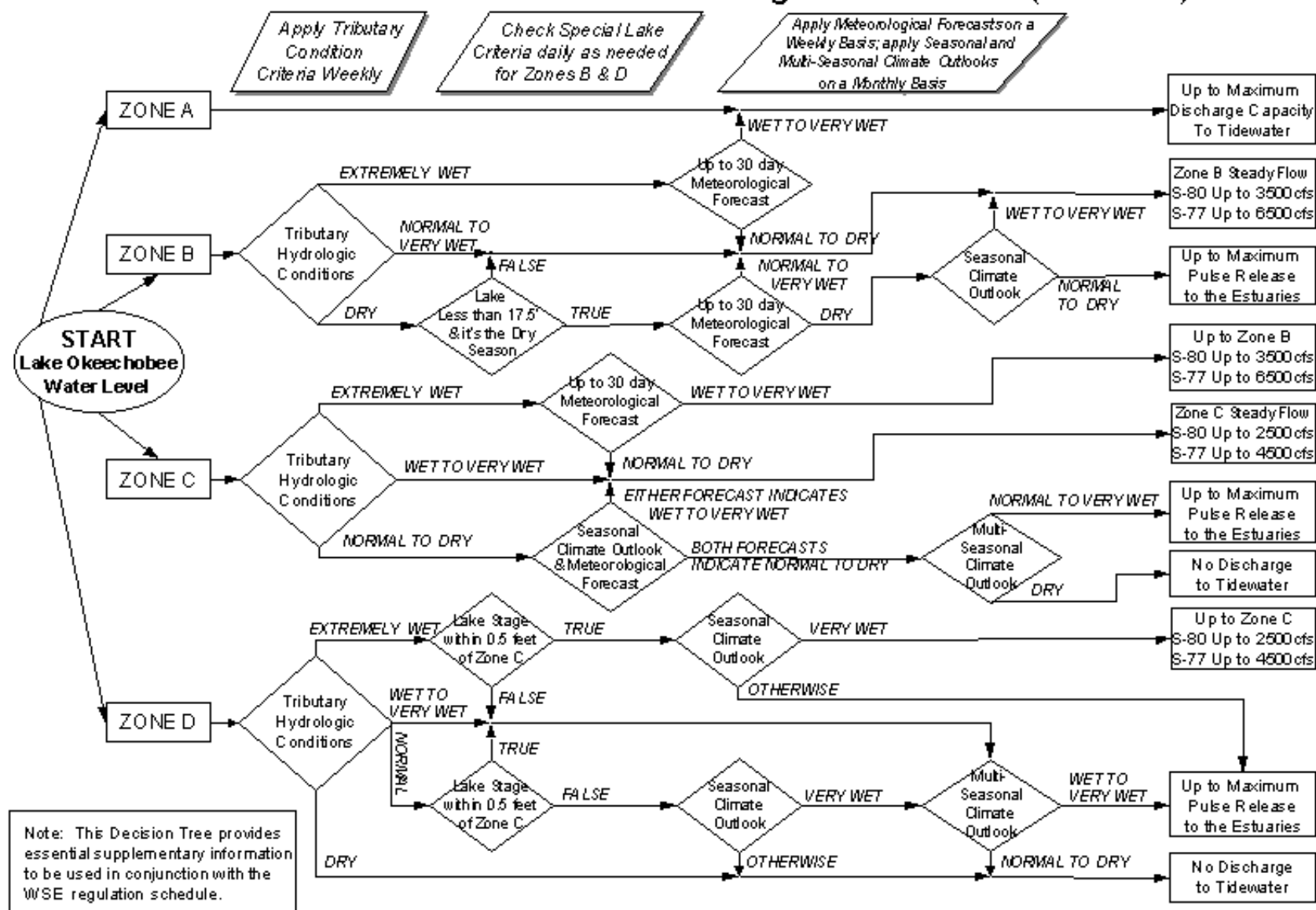
WSE Operational Guidelines Decision Tree

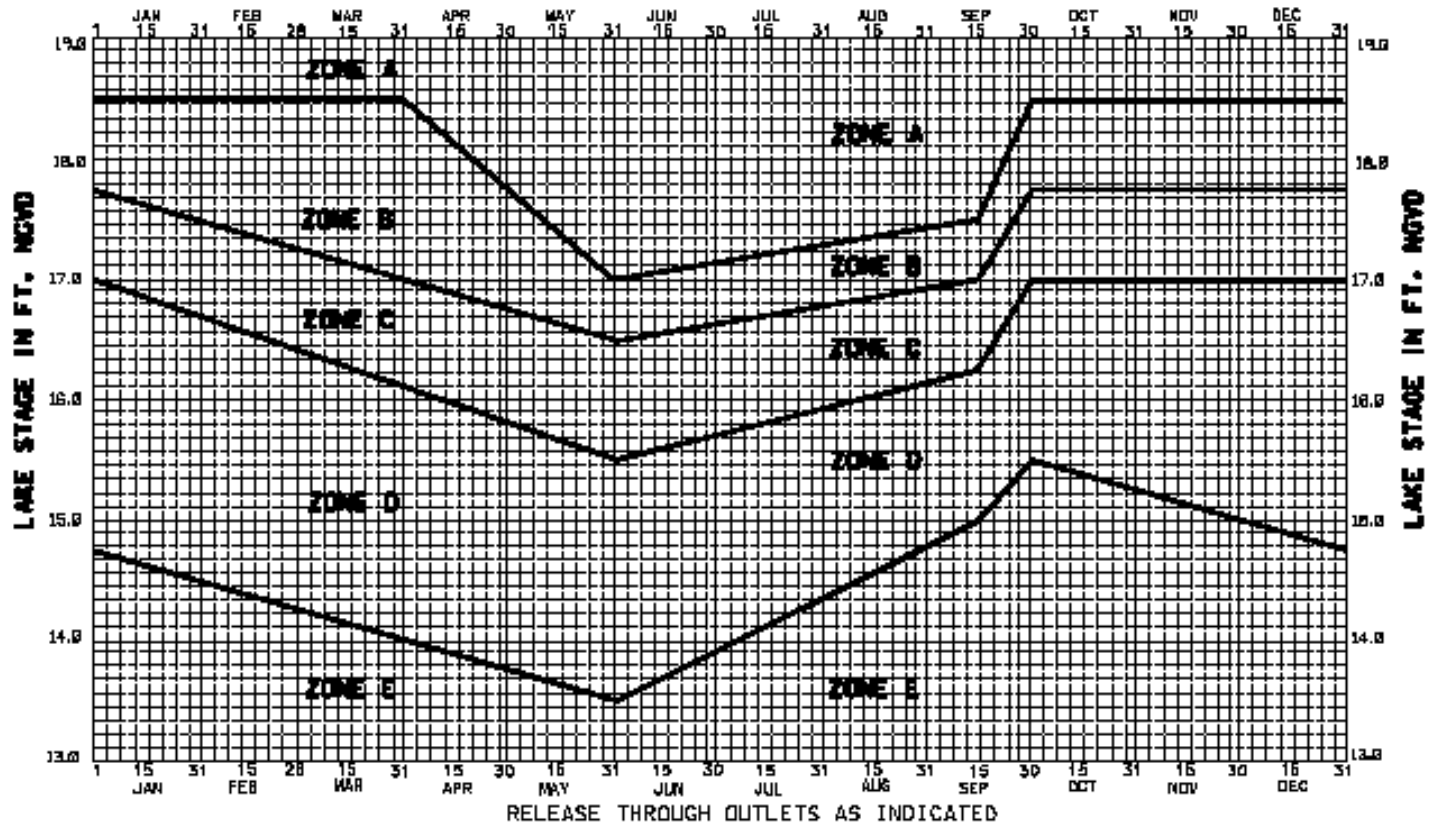
Part 1: Define Lake Okeechobee Discharges to the Water Conservation Areas



WSE Operational Guidelines Decision Tree

Part 2: Define Lake Okeechobee Discharges to Tidewater (Estuaries)





ZONE	AGRICULTURAL CANALS TO MCA# (1,2)	CALOOSAHATCHEE RIVER AT S-77 (1,2,4)	ST. LUCIE CANAL AT S-80 (1,2,4)
A	PUMP MAXIMUM PRACTICABLE	UP TO MAXIMUM CAPACITY	UP TO MAXIMUM CAPACITY
B (3)	MAXIMUM PRACTICABLE RELEASES	RELEASES PER DECISION TREE (THESE CAN RANGE FROM MAXIMUM PULSE RELEASE UP TO MAXIMUM CAPACITY)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM MAXIMUM PULSE RELEASE UP TO MAXIMUM CAPACITY)
C (3)	MAXIMUM PRACTICABLE RELEASES	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 6500 CFS)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 3500 CFS)
D (3,5)	AS NEEDED TO MINIMIZE ADVERSE IMPACTS TO THE LITTORAL ZONE WHILE NOT ADVERSELY IMPACTING THE EVERGLADES. (SEE NOTE 5.1)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 4500 CFS)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 2500 CFS)
E	NO REGULATORY DISCHARGE	NO REGULATORY DISCHARGE	NO REGULATORY DISCHARGE

- NOTES: 1) SUBJECT TO FIRST REMOVAL OF RUNOFF FROM DOWNSTREAM BASINS
 2) GUIDELINES FOR WET, DRY AND NORMAL CONDITIONS ARE BASED ON: 1) SELECTED CLIMATIC INDICES AND TROPICAL FORECASTS AND 2) PROJECTED INFLOW CONDITIONS. RELEASES ARE SUBJECT TO THE GUIDELINES IN THE WSE OPERATIONAL DECISION TREE, PARTS 1 AND 2.
 3) RELEASES THROUGH VARIOUS OUTLETS MAY BE MODIFIED TO MINIMIZE DAMAGES OR OBTAIN ADDITIONAL BENEFITS. CONSULTATION WITH EVERGLADES AND ESTUARINE BIOLOGISTS IS ENCOURAGED TO MINIMIZE ADVERSE EFFECTS TO DOWNSTREAM ECOSYSTEMS.
 4) PULSE RELEASES ARE MADE TO MINIMIZE ADVERSE IMPACTS TO THE ESTUARIES
 5) ONLY WHEN THE MCA# ARE BELOW THEIR RESPECTIVE SCHEDULES

CENTRAL AND SOUTHERN FLORIDA
 INTERIM REGULATION SCHEDULE
 LAKE OKEECHOBEE

DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT
 CORPS OF ENGINEERS, JACKSONVILLE, FLORIDA
 DATED: 5 NOVEMBER 1999

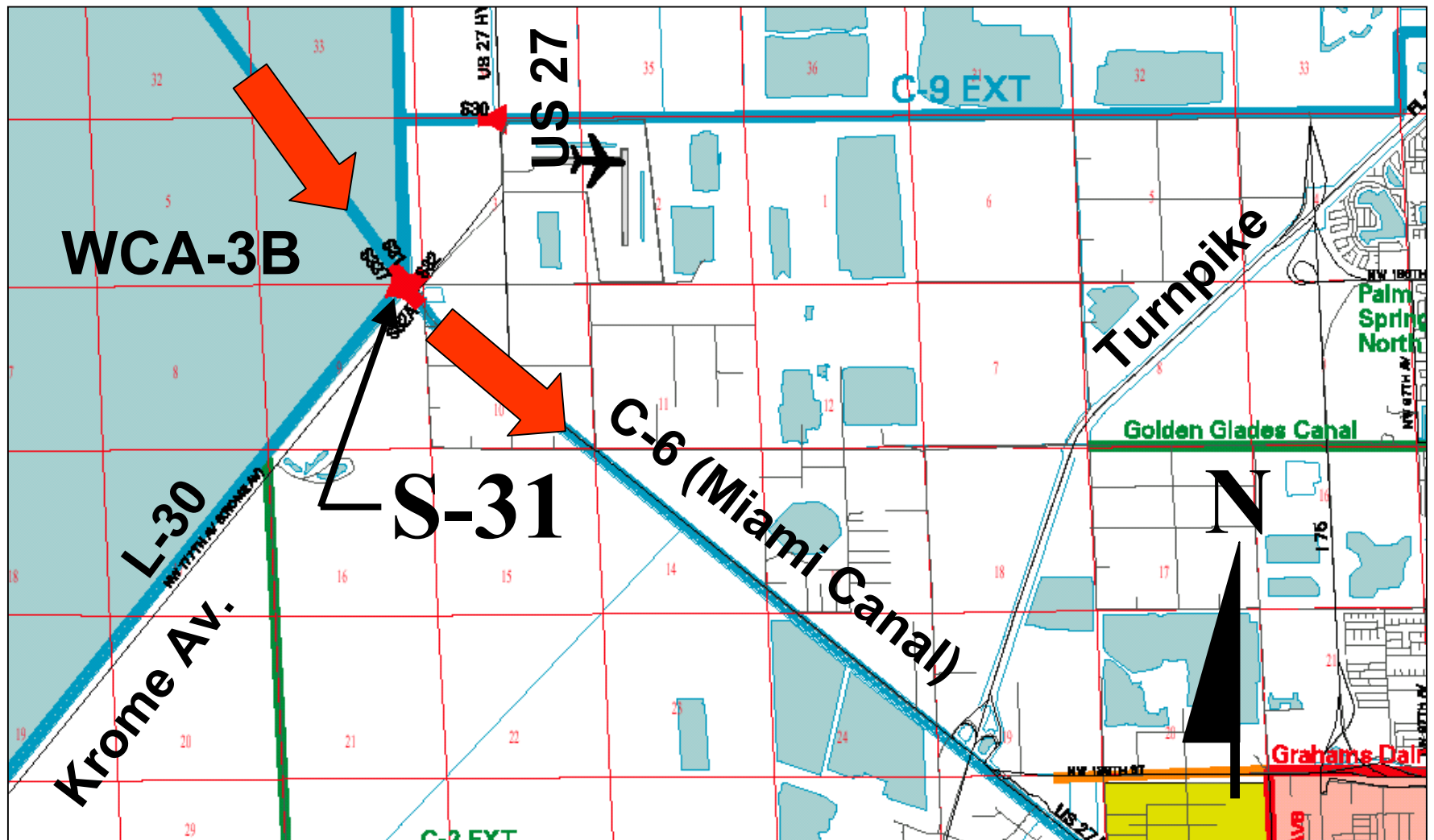
WSE (WITH CLIMATE OUTLOOK)



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S-31 Location Map

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